



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/286,099

04/02/1999

RAIMO BAKIS

YO999-046/87

4528

46069

7590

09/03/2008

F. CHAU & ASSOCIATES, LLC

130 WOODBURY ROAD

WOODBURY, NY 11797

EXAMINER

ARMSTRONG, ANGELA A

ART UNIT

PAPER NUMBER

2626

MAIL DATE

DELIVERY MODE

09/03/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/286,099

Applicant(s)

BAKIS ET AL.

Examiner

ANGELA A. ARMSTRONG

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No./Mail Date: _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hab-Umbach et al (US Patent No. 5,995,930) in view of Beutnagel (US Patent No. 6,078,885).
2. Regarding claims 1-22, Hab-Umbach et al teaches a method and apparatus for performing speech recognition which implements

Generating a series of reference signals, which are one of a plurality of vocabulary words (which reads on applicants generating waveform for N text sequences) at Abstract, col. 5, lines 20-30; col. 8, lines 21-32. Hab-Umbach does not specifically teach generating a synthetic waveform for each of the N-best text sequences. However it was well known in the art to implement generating synthetic speech of a N-best text sequence for the purpose of reducing recognition errors due to decoding errors of acoustically similar words. Beutnagel teaches systems for updating dictionaries in a speech synthesis and recognition system and describes methods of scoring N-best pronunciations for given words and generate the words via a text-to-speech system as to score the candidates (col.1, lines 52-54). It would have been obvious to one of ordinary skill at the time of the invention to modify the system of Hab-Umbach to implement generating a synthetic waveform for each of the N-best text sequences as described by

Beutnagel, for the purpose of reducing recognition errors due to decoding errors of acoustically similar words

Comparing test signals to the reference signals (which reads on applicants comparing synthetic waveform to the original waveform) at Abstract, col. 5, lines 20-30; col. 8, lines 21-32

Outputs the word or words having the best evaluation result based on the comparison at col. 8, lines 10-14 and lines 21-32

Dynamic programming (aligning) at col. 5, lines 31-33, Abstract, and Figure 2, element 26

Vocabulary arranged in a tree structure based on phonemes (Viterbi) at col. 3, line 57 – col. 4, line 36 and Figure 1A.

Generates and retrieves values from spectral components of speech signal (feature vectors) at col. 8, lines 21-32

Computing individual scores, summing the scores and setting a new minimum score at col. 5, line 30 to col. 6, line 55

Repeating the process for every vocabulary word in the list (setting a parameter to $n=1$, retrieving the n -Th waveform and text sequence, incrementing the parameter by one, repeating the steps until each sequence has been considered) at Abstract, col.6, lines 56-58.

Response to Arguments

3. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANGELA A. ARMSTRONG whose telephone number is (571)272-7598. The examiner can normally be reached on Monday-Thursday 11:30-8:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick N. Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Angela A Armstrong/
Primary Examiner, Art Unit 2626